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XV. — *Early Cyprian Greek*¹

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1. In the year 1852 attention was directed by the Duke of Luynes to certain inscriptions found on the island of Cyprus which wer written in a peculiar script² showing no clear relationship to other systems of writing. These remarkable inscriptions wer generally assumed to hide some oriental tongue—Egyptian, Phenician, or Lycian—and wer permitted to lie twenty years longer, practically neglected. In 1872, an Englishman, the brilliant young Assyriologist George Smith, though ignorant of Greek, succeeded, by the study of a Cyprian-Phenician bilingual text, in determining the syllabic character of the script and in identifying twenty-two out of fifty-four characters.³ That the language involvd was Greek, was at once shown by the English Egyptologist Samuel Birch.⁴ Thus classical philology was enricht by the acumen of workers in related branches of study, and classical scholars wer not slow to avail themselvs of the new material, especial credit being due Brandis, M. Schmidt, Deecke, Sigismund, and Ahrens.

2. The various attempts to discover the *origin* of the new script wer less fortunate. Deecke tried to prove it a derivativ of cuneiform, while Sayce, Taylor, and Wright claimd Hittite pictographic writing as its source. As late as 1913, this idea was still entertaind by Larfeld. But some years earlier Evans had shown⁵ that Minoan linear script, an outgrowth of Minoan pictographic script, had the closest affinities to the Cyprian. It is interesting to observ that, while the outlandish-looking texts found in Cyprus wer accepted

¹ The numerous references to Evans's *Scripta Minoa* (*S.M.*) in the form “P. 26 b” ar not to pages, but to the inscriptions so markt, and the page on which such an inscription will be found is added after the abbreviation *S.M.*

² Larfeld, *Die kyprisch-griechische Silbenschrift*, Müller's *Handbuch*,² I, v, 200–203 (1914). Thumbl, *Handb. d. griech. Dialekte*, 284–289 and vii (1909).

³ *Trans. Soc. Bibl. Arch.* I (1871), 129–144.

⁴ *Ib.* I, 153–172.

⁵ *S.M.* I, 68, etc. (1909).

as Greek, the script in which they were written was assigned, almost as a matter of course, some un-Greek or supposedly un-Greek origin. In 1903, Messerschmidt⁶ wrote: "The use of such a complicated system side by side with the Greek [that is, the usual Greek script] testifies to the great preponderance of the pre-Hellenic civilization in Cyprus." And this in the face of the fact that practically all the inscriptions found written in this script are Greek,⁷ and that, while "it remained in regular use until the fourth century, before that time the Greek alphabet occurs in Cyprus only in a few inscriptions erected for visitors."⁸ Even Evans argues:⁹ "The very fact that the Cypriote syllabary seems to have been derived from this earlier Aegean and 'Mycenaean' script, or perhaps some parallel Asiatic branch, reacts against the Hellenic character of the original. For the Cypriote characters were never originally framed for Greek use. The Greek of the Cypriote inscriptions always seems to be clothed in a foreign dress ill-fitting at the best." And later, in *Scripta Minoa* (1, 74), in like vein: "It must in any case be recognized that the Cypriote syllabary itself has every appearance of having been originally devised for a non-Hellenic language, and that its adaptation to the Greek, at whatever date it took place, was of a cumbrous and inadequate nature."

3. Evans evidently has in mind some such scholarly activity as Wimmer ascribed to his old *Runenmeister*.¹⁰ It thus becomes clear that it still is necessary to insist upon the radical difference between the gradual spread of writing from one community to another in the course of trade, commerce, and conquest, on the one hand, and, on the other, the deliberate adaptation of letters for the purpose of translating missionary texts, such as the Bible, into Gothic or Slavic. Of adaptations of the latter sort we have more or less historical

⁶ *The Hittites*, 30.

⁷ I shall show elsewhere that two at least of the few unread texts are Etruscan.

⁸ Myres, "Cyprus," *Encycl. Brit.* VII, 699 a.

⁹ *Journ. Hell. Stud.* XIV, 354 (cited below as *J.H.S.*).

¹⁰ Hempl, "Wimmer's Runenlehre," *Philologische Studien*, Festgabe für Eduard Sievers, 1896.

knowledg, and thus easily slip into the error of assuming that they ar typical of all transfers of script from one people to another. On the other hand, direct knowledg of the normal gradual development and diffusion of writing is, from the nature of the case, very difficult to obtain. Still, we now know that when the Greek letters past, for example, to the Etruscans and to the northern Germanic tribes at the farther end of the amber route, there was no deliberate or systematic adaptation of the foreign symbols to their new use. Each Greek merchant wrote the foreign name or word as it sounded to his Greek ear and with such Greek letters as he was in the habit of using, and the nativ followd his example. In this way it came about that both the Etruscans¹¹ and our forefathers¹² adopted *various* forms of Greek writing, and in one and the same community used indiscriminately more than one sign for the same sound.¹³ These practices ar themselvs the best evidence of the manner in which Greek writing spread to other peoples. The nearest approach that I know of to such adaptation as Evans seems to hav in mind involvs simply the neglect of certain inconsistencies and unnecessary additions when employing a script to write a new language, as happend when cuneiform was employd in writing Persian.

4. It is well known that the deliberate devising of a system of writing is rare, so rare that we surely cannot assume it in any case without definit warrant. From ideographic writing up, we hav to do, not with invention, but with development — alphabetic writing developt out of penalphabetic writing, this out of syllabic writing, and syllabic writing out of iconomatic writing,¹⁴ which in turn grew out of ideographic

¹¹ Compare the "Phrygian" hand on the Lemnos Stone with the usual Italian hand; and the difference in the use of *s* and *ſ*, *c* and *k*, etc., in Italy itself. The Etruscans in Praesos used a form of the local Greek script, and the Etruscans in Cyprus employed Cyprian syllabic writing; see n. 7.

¹² Hempl, "The Variant Runes on the Franks Casket," *T.A.P.A.* xxxii (1901), 186-195.

¹³ Hempl, "Early Etruscan Inscriptions," 7, *Matzke Memorial Volume*, 113.

¹⁴ Evans is in error in assuming that Minoan pictographic writing is ideographic; it is iconomatic, § 16. See Hempl, *The Hittite Text on the Tarconde-mus Boss*, §§ 15-17; also *The Flügel Memorial Volume*, 135.

writing, itself a specialized form of picture drawing.¹⁵ All these outgrowths and re-formations were very gradual and practically unobserved at the time. At most, we may recognize that here or there, in some college of priests like that in which the Phaestos Disc was imprest, or in a royal chancery like that at Cnossos, the casual innovations that had grown up in the current system and pointed to some better system were made into a principle of general application, and thus formed a step in advance. The syllabic writing found in Cyprus and that on the Phaestos Disc¹⁶ (in which the only syllable recognized as an orthographic unit was (1) a simple vowel, for example, *a*, *e*, etc., or (2) a single consonant followed by a vowel, for example, *ba*, *be*, etc.) constituted such an advance on the more primitive syllabic writing (for example, cuneiform) which recognized syllables like *ab* and *bab*, as well as *ba*, and on such still more primitive syllabic writing (for example, Minoan) as recognized syllables like *nau*, *tra*, etc. The feeling that it was contrary to the very nature of the Greek language, if not also to Greek genius and temperament, to employ syllabic writing except under the perverting influence of some barbaric neighbor, and that, when Greeks are found using such writing, this in itself is sufficient evidence that they were forced by stress of circumstances to employ a cumbersome and inadequate adaptation of some foreign system,—such a conception reflects a point of view that one does not like to associate with the scholar who dared to ignore traditional learning and dig in Greek soil itself for the beginnings of Greek writing.

5. Evans made it clear¹⁷ that Rougé's theory of the de-

¹⁵ Lest it be supposed that I have overlooked the fact, I may here state that, in 1912, Flinders Petrie published *The Formation of the Alphabet*, a detailed exposition of his theory that the alphabet arose out of "a wide body of signs . . . gradually brought into use in primitive times for various purposes," which were "simple enough to defy corruption, and were ready to crystallize into a general system so soon as the selective influence began to work." The book is a great disappointment to the admirers of the distinguished author.

¹⁶ See the popular account of my study of the Disc, "The Solving of an Ancient Riddle," *Harper's Magazine*, January, 1911; also *S.M.* 1, 22-28, 273-293. I expect to publish a detailed treatment of the Disc in the near future.

¹⁷ *S.M.* 1, 77-94.

velopment of the Greco-Phenician alphabet from Egyptian hieratic, and ultimately from Egyptian hieroglyphic writing, would at least hav to reckon with the possibility that it was Minoan writing rather than Egyptian to which this honor belongd. He argued the probability that the Phenicians got the script from Minoan settlers on the Syrian littoral, formulated it into an alphabet, and past it on to the Greeks. In a forthcoming paper (read at the meeting of the American Archaeological Institute at Philadelphia, December, 1914) I hav undertaken to show that the Semitic alphabet was derived from a Greek alphabet ending in Y, and that the Semitic names for the letters ar adaptations (partly due to a species of popular etymology) of the unmeaning Greek names. These Greek names wer, for the most part, corruptions of the syllables of the *e*-consonant row ($\beta\hat{\eta}\text{-}ta$, $\zeta\hat{\eta}\text{-}ta$, $\kappa\hat{\eta}\text{-}ta$, etc., and $\xi\epsilon\iota$, $\pi\epsilon\iota$, $\phi\epsilon\iota$, etc.) of a system of syllabic writing akin to the Cyprian and, like this,¹⁸ a development of Minoan linear script, which was an outgrowth of Minoan pictographic writing. As the alphabet past through non-Javonian hands, some confusion arose between $\hat{\eta}$ ($\epsilon\iota$, $\hat{\imath}$) and \hat{a} ; see § 14, 20, 28, end. For proofs and details I must refer to the paper itself. But these statements will, I trust, suffice to make clear the position assumed in the following pages as to the relation of Cyprian writing to Minoan writing and to the Greek alphabet.

6. My primary object in preparing this paper is to present my interpretation of the archaic inscriptions on the "clay balls" found "in connection with one of the Enkomi tombs" and on the gold ring "discovered in a typical Cypro-Myce-naean tomb at Larnaka,"¹⁹ and to show that the language on the balls is non-Javonian Greek (§ 13, § 20), probably of the same type as that found in the later Cyprian texts. In doing this, I shall seek to make clear the relationship that the characters bear to the earlier Minoan, on the one hand, and to the later Cyprian, on the other. This will involv references to various matters that I must not here enter into

¹⁸ *S.M.* 1, 68-77.

¹⁹ *S.M.* 1, 70.

in detail. Thus I can only *cite* the Minoan inscriptions illustrativ of my statements as to Minoan usage, and for their interpretation must refer the reader to my forthcoming reports.²⁰ I shall, however, endeavor to supply all that is really necessary to a clear understanding of the subject under discussion. That the characters in these inscriptions ar related to the later Cyprian characters is obvious, and Evans succeeded in identifying about half of them. He also correctly associated most of them with the corresponding Minoan signs, though in all this he was guided only by resemblance in form, and so could not *prove* the relationship.

7. There ar three balls, and each bears one inscription. I shall consider the longest first. Paragraphs that somewhat interrupt the treatment of the inscription proper, like § 12, § 14, etc., ar inclosed in [] and may well be skipt at first. In order that the characters may appear in their true light, I place the inscription in the middle,—that is, after the corresponding Minoan characters found in Crete, and above the later Cyprian characters.

8.

BALL A, S.M. I, 70.



bu ra pa csa qe si ta qe later Cyprian values.

= Bo-pa πα-σκα qe σι-τα qe, which in Attic would be—
Bo-pa πάσκος τε σῖτος τε ‘Meat and clay and grain.’

²⁰ See, however, § 14, § 16, § 20 nn., and § 26.

For the respectiv Minoan characters, see *S.M.* 1: (1) pl. 5, “P. 92 *a*,” pl. 6, “P. 83 *a*”; pl. 4 A, “P. 58 *b*,” also § 24 below; (2) pl. 5, “P. 96 *a*; pl. 4 A, “P. 50 *b*; (3) pl. 5, “P. 92 *a*,” also end of § 12 below; (4) *S.M.* 1, 71, also § 13 below; (5) *S.M. ib.*; (6) pl. 6, “P. 83 *a*; *S.M.* 1, 71 and 48; (7) pl. 3, “P. 51 *a*,” pl. 4 B, “P. 76 *a*; *S.M.* 1, 71 and 47; (8) *ib.* 32 *a*; *ib.* 32 *c*. The ‘ between the first two words and before the final *ge*, is a punct; it agrees with that found in most Minoan linear texts and in later Cyprian.

8 *a*. *πασκα* and *σιτα* by the side of *πάσκος* and *σῖτος* ar really collectiv feminins. Of these, *σιτα* persisted as a plural of *σῖτος*. Compare *δεσμός* — *δεσμά*, *κύκλος* — *κύκλα*, Latin *jocus* — *joca*, *locus* — *loca*, etc., also *ποτά* in *σῖτα καὶ ποτά* ‘food and drink.’

9. The Minoan *ox* (§ 8, 1; also *S.M.* 1, 206) *βοῦς* had the value *po* / *pho* / *bo* (e.g. “P. 64 *c*,” *S.M.* 1, 164) or *pu* / *phu* / *bu* (e.g. “P. 92 *a*,” *S.M.* 1, 169). In our inscription it has the value *bo*; but *bu* prevaild in later Cyprian. The origin of the later Cyprian sign was not recognized by Evans; see § 24.

10. The Minoan *mallet* (§ 8, 2; also *S.M.* 1, 190) *ράιστήρ* has various forms, with the handle above (“P. 26 *b*,” *S.M.* 1, 154) or below (“P. 50 *b*,” *S.M.* 1, 163). Evans observd the relation of the early Cyprian form to the Minoan, but he did not recognize the identity of the usual Cyprian sign. See § 24. In Minoan the character spells *raist* (e.g. “P. 26 *b*,” *S.M.* 1, 54) or *ra* (“P. 94 *a*,” *S.M.* 1, 169). Both Cyprian forms of the character spell *ra*.

11. The linear form of the *child* (§ 8, 3; also *S.M.* 1, 181) *παις* was not recognized by Evans. The most realistic form of the pictograph is found on a seal,²¹ where it spells its full name. On tag “P. 92 *a*” (*S.M.* 1, 169; see also pl. 5 and p. 181) the pictograph, which much resembles the corresponding Egyptian pictograph,²² has the value *ba*. In linear writing of both classes the pictograph appears simplified to

²¹ *J.H.S.* XXI, 129. Evans took the legend for a scene like that of the Cretan Zeus suckled by the goat Amaltheia, apparently quite overlooking the pictograph of the *arm*.

²² Evans (*S.M.* 1, 240) erroneously compares the Egyptian pictograph of a *man*.

≠ or ≠,²³ with the value *pa* (fig. 12, 13 c, 22, 23, 25, *S.M.* I, 29, etc.). The Cyprian ≠ (early and late) has the value *pa / pha / ba*. A very conservative linear form is found on ball C (§ 21). In the Minoan linear texts shown in figs. 23 and 25 (*S.M.* I, 47 and 49), the character occurs in a word used at the end of numerical tabulations. Evans therefore inferred²⁴ that this word must mean 'total.' It turns out to be *πάντα* 'in all,' or 'total.' On the Phaestos Disc¹⁶ a similar figure of a helpless-looking child, clad only in a little shirt, has the value *pa* (or *p*, the *a* being canceled by the virama).

[12. The Minoan simplification of the figure of the child to ≠, ≠, was unfortunate; for it made it conflict with forms of Ι, Τ, or ≠ (fig. 17, 1; 24, 3; *S.M.* I, 35 and 47), that is, the *στήριγξ* or *στηριγμός* 'the column or support used to sustain a ceiling or an upper wall,' § 14, 27, 16. The Ι of Ι is the column proper; the upper Τ is the capital; the lower Τ is the base. This character appears in exactly the same forms in early Greek alphabets, namely, as the letter Ι or ≠, ξῆτα, with the value *st / ts / dz / z*. Some Minoan texts use ≠ for *pa* and ≠ for *ste / sta* (for example, fig. 22, *S.M.* I, 46), others *vice versa* (figs. 23, 24, *S.M.* I, 47).]

13. Evans did not make out the character *csa / sca* (§ 8, 4). It corresponds to the Hittite **A** or **AA** and the Egyptian **III**, all signs for *district*.²⁵ In Minoan, however, it has the value *ξέ[vn]*, or *foreign country*, which in Egyptian was expressed by three mountains, by origin the same as the Assyrian sign for *country*. The later Cyprian character has the value *csa* instead of *cse*, see § 5, end. Similarly, our early Cyprian character has the value *sca*; for we could hardly assume metathesis of *sc* to *cs* in Greek. The later Χ is a characteristic Cyprian way of writing such a letter as X, which arose from making × one side at a time. Compare the development of the lower part of Ο, Ω, Ρ, Ρ, Σ, Σ, ω, etc., that is ω.

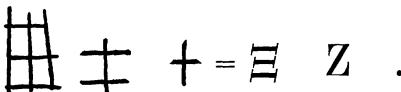
²³ It is remarkable that the Chinese pictograph of the *child* underwent almost exactly the same development, becoming 子.

²⁴ *S.M.* I, 46.

²⁵ Hempl, *Tarcondemus Boss*, §§ 50–52 (see n. 14); also *Flügel Volume*, 149–152. The Minoan form reappears in Chinese as 土 'fields,' 'farm.'

The \times is a tilted form of +, which is the simplification of \boxplus in Western Greek scripts, § 17.

[14. The Minoan sign for *foreign country* is the source of Greek \boxplus , Ξ , Ξ , as well as of +, \times ; and $\xi\epsilon[\nu\eta]$ is the source of the name *csē*, $\xi\epsilon\iota$, $\xi\iota$, which in non-Javonian could appear as $\xi\hat{\alpha}$, as shown above (§ 13). The Minoan inscription on the Goulas cup²⁶ betrays the Javonian form of the name —



$\xi\epsilon[\nu\eta]$ — $\sigma\tau\hat{\eta}[\rho\nu\gamma\xi]$ = $\xi\epsilon\sigma\tau\hat{\eta}$ ‘polisht’ (§ 16).

[15. For the $\sigma\tau\hat{\eta}[\rho\nu\gamma\xi]$, see § 12. Evans is in error in regarding the cross (+ or \times) as a “beginning sign,” like the cross at the head of some Christian inscriptions. It is the usual punct in Minoan pictographic texts, and, if used but once, stands at the end. It may, however, separate words, and it is occasionally found both at the beginning and at the end of an inscription. In the distich on the seal of the priestess of Gea (“P. 26,” *S.M.* I, 154), the cross stands at the beginning, at the end, and between the two verses, namely, in the middle of line *c*.²⁷

[16. In speaking of the Goulas cup (§ 14), Evans says: “Its surface had originally been covered by a dark varnish,” and it is doubtless this extra embellishment that the adjective *ξεστή* refers to. The legend is, of course, recommendatory, just like the legends that appear on bowls etc., speld¹⁴ —

meniscus — *mixing vessel* (*S.M.* I, 192, 30; I, 35)

$\mu\hat{\eta}\nu\eta$ — $\kappa\rho\alpha\tau\hat{\eta}[\rho]$

= $\mu\varepsilon\nu\kappa\rho\alpha\tau\hat{\eta}$

²⁶ *J.H.S.* XIV, 278.

²⁷ To judge by pl. 2, line *c* is turned upside down in the cut on page 154, so that the bird is made to rest on its back, with its legs waving in the air. The plate also shows that the crost lines in the cut, which Evans took for “an X sign which almost runs into the figure below,” arose through the misdrawing of the legs of the inverted bird, one of which is made to start from the bird’s breast and extend backward, whereas it really starts under the middle of the body, just where the other does, and goes straight down, the bird resting upon it. In his earlier report (*J.H.S.* XVII, 338) Evans spoke of “the cross-legged bird,” and arranged the four sides of the seal in an order differing from both of those in *S.M.*

meniscus — mixing vessel — mason's pick (*S.M.* 1, 189, 21)

μήνη — κρατ[ήρ] — τύ[κος]
= μενεκρατο(ν);

meniscus — mixing vessel — column (§ 12)

μήνη — κρατή[ρ] — στῆ[ριγξ]
= μενεκρατεστη;

meniscus — mixing vessel — plummet — door (*S.M.* 1, 198, 44)

μήνη — κρατή[ρ] — σταθ[μή] — θύ[ρα]
= μενεκρατεστατο(ν);

all of which mean 'extra strong.'²⁸

[17. As a form of Ξ, the character ☐ appears in various Western Greek alphabets found in Italy. In actual use it is exceedingly rare, and its phonological value has hitherto been unascertained. But this is determined to be the same as that of the Eastern Ξ Ξ (whose place it occupies in the alphabet) and that of the Western + X, by the Etruscan inscription on the *tazzetta* Fabretti, 296 ter b, where the letter occurs in the word šupelneξ 'vessel.' That is, ☐ and + were doublets.

[17 a. It is evident that Etruscan šupelneξ past into Latin, where it became *supellex*, with the regular Latin change of

²⁸ *S.M.* 1, 35. Here Evans erroneously takes the στῆ[ριγξ] for a "male suffix," and the τύ[κος], as also the σταθ[μή] — θύ[ρα], for "female suffixes," just as he takes the character that spells χῖλος / χῖλιος 'thousand' (*S.M.* 1, 48) for an "ideograph of woman," because the lower part of it resembles a woman's skirt. It is clear that in Minoan of Class B μενεκράτης had joined the o/a-declension. The superlatives μενεκρατεστη and μενεκρατεστατο(ν) are due to the influence of a comparativ μενεκρατεσ-τερος : μενεκράτης : ἀληθέσ-τερος : ἀληθής (Hirt, *Handbuch*,² § 286). Cf also κρατεστη, n. 32; δα-κρατη, n. 33. Fig. 25 (*S.M.* 1, 48), which Evans calls a "tablet showing women's names," because he took the character that spells χῖλος / χῖλιοι for an "ideograph of woman," is remarkable in more than one way. It is a chronicle of the various forms of punishment meted out to a conquered people, and so gives us reason to hope that the texts are not all commercial. In place of the numerical signs found in commercial documents (*S.M.* 1, 256), the words for 'ten,' 'sixty,' 'hundred,' and 'thousand' are spelled out in full, except that the usual signs for units and tens are employed in telling how many larger units are taken, as though we were to write "1 ten," but "10 thousand." At another time I shall explain the relation of the Minoan character χῖλος to the Egyptian sign for 'thousand.' See also § 27, end.

In to *ll*, as in **pel-no* > *pello*, etc. We thus for the first time get a satisfactory etymology of *supellex*, *supellectilis* ‘vessel(s),’ ‘utensil(s).’ For Etruscan *šupelneξ* is from a *super-necto*, which doubtless meant ‘cover over with a web or network of interwoven cord, straw, or osier,’ cf. also *super-dēlico*, *super-stringo*, *super-tego*, etc. The term evidently arose with reference to earthenware vessels protected in this way, compare *πτυρίνη* ‘a flask covered with plaited osier, like Florence oil flasks.’ The change of the meaning from ‘vessel’ to ‘household utensil(s)’ is paralleled by that suffered by *vās*, *vāsa*, and our all-encompassing *pots and pans*. Compare also Cicero’s *supellectilem ex aere elegantiorcm et Deliacam et Corinthiam* (*in Verrem*, II, 83), *multam Deliacam supellectilem, plurima vasa Corinthia* (*ib.* 176), *ullum argenteum vas, ullum Corinthium aut Deliacum* (*ib.* IV, 1).]

18. The *hand* (§ 8, 5 and 8, § 33; also *S.M.* I, 71) $\chi\epsilon[\rho]$ is very common in Minoan linear writing and always has the value *ce* / *che* / *ge* / *qe*. It thus vied with the *arrow* $\kappa\eta[\lambda\omega\nu]$ ²⁹ as a spelling for *qe*,³⁰ the later *τε* ‘and.’ For the Cyprian development, see § 33. In the Western Greek scripts, the linear forms Ψ and ψ were simplified to Ψ ,³¹ Ψ , and ψ , and got the special function of representing *ch*, the aspirated *c* (with the name $\chi\epsilon\hat{\imath}$ / $\chi\hat{\imath}$), for which χ χ was used in Eastern scripts.

19. The *granary* (§ 8, 6; also *S.M.* I, 71 and 198) $\sigma\iota[\tau\delta\delta\kappa\eta]$ or $\sigma\iota[\tau\theta\beta\delta\lambda\omega\nu]$ has various forms in Minoan and Cyprian, as shown in §§ 8, 21, 22. In later Cyprian, Δ underwent the development Δ , Δ , or Δ . The *granary* always spells *si*.

20. The *right hand* $\delta\epsilon\xi\acute{\iota}\acute{d}$ (§ 8, 7), with the fingers together and the thumb projecting (as in shaking hands, on making a bargain or other agreement, or in taking oath, cf. *δεξιά* ‘right hand,’ also ‘assurance, pledge, treaty’), has in Minoan pictographic writing the appearance of a hand in a mitten, with the thumb extended (*S.M.* I, 183); in linear script it appears as \vdash (*ib.* 71), in Cyprian as \dashv or $+$, in later Greek as T , etc.

²⁹ Hempl, *Tarcondemus Boss*, § 10; *Flügel Volume*, 134.

³⁰ The same, § 7

³¹ Compare the Chinese simplification of the *hand* to a prone Ψ .

In Minoan it originally had the value *de / te / the*,³² which in non-Javonian might become *da / ta / tha* (§ 5, end). Evans did not recognize the origin of *t*. This *t*, *f*, *+*, *T*, *de / te / the* or *da / ta / tha* was confused with \oplus *ta / tha / da* (from $\tau(a)$ -*ροχός* ‘wheel’),³³ the two being ultimately differentiated as \oplus *the* (or $\Theta \theta\hat{\eta}\text{-}ta$) and *T ta* (or *T τâ*, later *τaū*, with *v* pickt up from the following $\Upsilon \hat{v}$ *ψιλόν*). For confusion, with subsequent differentiation resulting in the reversal of the original values, compare Oscan *R d*, *D r*.

21. BALL B, S.M. I, 70.

In other words, the legend is the same as that on ball A (§ 8), with the omission of the word *Bo-pa*. The writing is small, carelessly done, and somewhat obliterated. The vertical line of the character *si*, which is clearly and correctly made on ball A (§ 8) and ball C (§ 22), is represented by a little dab near the top and outside of the frame of the letter. The

³² E.g. in fig. 24, 3, S.M. I, 47:—

mixing vessel — *right hand* — *column*
κρατή[ρ] — / *δε*[ξιά] — *στῆ*[μγξ]

= *κρατεστη*, where it servs with the preceding *-τη* as a cumulativ spelling of *-τε-*. Cf. *μενε-κρατεστη*, § 16. For cumulativ spelling, see Hempl, *Tarcondemus Boss*, § 12; also *Fliegel Memorial Volume*, 134.

³³ E.g. in fig. 24, 2, S.M. I, 47:—

wheel — *mixing vessel* — *mason's pick*
τ(a)[ροχός] — *κρατ[ήρ]* — *τύ[κος]*

= *δα-κρατυ* ‘very strong’ or ‘excellent’: *κρατύς* :: *δα-φοινός* : *φοινός*, etc. Cf. *μενε-κρατη*, § 16. A rather elaborate form of the *wheel*, followd by the *torch*, *τ(a)[ροχός]* — *λαμπάς*, was employd to spell *τάλαντα* ‘talents.’ It was also used to represent the singular, much as we use £ and \$ for both singular and plural. The realistic form of the *wheel* in this use led Evans to regard it as an ideograph and to designate fig. 24 as “a tablet relating to chariot wheels, which, considering the rough and declivitous character of a great part of the island, must have been an expensive item,” S.M. I, 47. For such inexact spellings as *τα-λαμπα* for *τάλαντα*, see Hempl, *Tarcondemus Boss*, § 13.

pa still resembles the pictograph of the *child* (§ 8, 3, § 11). Instead of the final *qe*, the scribe repeated the *csa qe* of the earlier part of the inscription, but, on observing his mistake, tried to obliterate the *csa*. I am not clear as to how to explain the character which on ball B and ball C takes the place of the *hand* on ball A. It might be a form of the *hand*, were it not that it seems to occur in Minoan (fig. 13 a, *S.M.* 1, 32, second line at the right) side by side with what appears to be a form of the *hand* (same, extreme right hand of third line). All will doubtless be clear when Evans publishes his second volume. Evans (*S.M.* 1, 71, 11) associates the early Cyprian character on ball B with similar characters that he finds in his unpublished Minoan texts, perhaps doublets of the one shown in the middle of the third line and twice in the seventh line of fig. 25, *S.M.* 1, 48. His association of these with the Cyprian character for *e* (*S.M.* 1, 71, 11) is certainly mistaken; see § 34. Ball C spells *qe* with a character that is the same as one (if not both) of those on ball B. This Evans (*S.M.* 1, 71, 2) regards as a distinct letter and erroneously associates it with the later Cyprian letter for *a*. In the original the writing on ball B, as also that on ball C, is retrograde.

22.

BALL C, *S.M.* 1, 70.

ra pa si ta qe
 = Pa-pa σι-τα qε
 'Turnip and grain.'

The writing is bold, but rapid. Compare the form of *ra*⁸⁴ with that shown on ball A, §§ 8, 10. The *ta* appears to lack its horizontal stroke or was unintentionally omitted before the upright punct; see + | on ball A, § 8. *ραπα* corresponds exactly to Latin *rāp̄a* 'turnip,' compare Greek *ῥάπτης* / *ῥάφης* 'turnip,' *ῥάφανος* / *ῥάφάνη* 'radish,' 'cabbage,' *ῥαφανίς*.

⁸⁴ It is fortunate that the inscription contains a normal *si*. Otherwise one might suspect that our carelessly made *ra* was an inverted form of the carelessly made *si* on ball B.

23. It would seem that our "clay balls" are sacrificial or votiv offas, and that the legend tells in each case of what the sacrifice consists. Apparently a small portion of the first fruits of the fields or of the flocks was mixt with earth and dropt into or near a tomb, that it might the better reach Mother Earth³⁵ and lead her to be propitious. The offa was a substitutional sacrifice,³⁶ taking the place of meat, cakes, or other food. "At the sowing festival of the Thesmophoria, held by Greek women in October, it was customary to throw cakes and pigs to serpents, which lived in caverns or vaults sacred to the corn-goddess Demeter."³⁷ The sacrifice of a cake made in the form of an animal and substituted for the real animal that was required by the ritual, is well known. "At the Diasia, for instance, an ancient agricultural feast, held in honor of Zeus Meilichios, cakes were offered in this shape by tradition. Mommsen thinks the first-fruit corn at Eleusis was workt up into such cakes."³⁸ These substitutes wer, of course, much cheaper than the real sacrifice; still, they wer believd to hav the same efficacy. We ar not to suppose that each devotee himself prepared such an offa and wrote on it its component parts. On the contrary, it is clear that we hav to do with sacrificial substitutes put up by the priests and kept on hand in readiness for the requirements of the people, much as votiv candles are kept in Roman Catholic churches.³⁹ This explains the inscriptions, which ar no more and no less than labels, enabling the priest to select the right offa for the farmer who seeks the prosperity of his flocks, his grain field, or his turnip patch,— just such labels as the apothecary attaches to his preparations, in order that he may correctly furnish what is wanted by his various customers.

³⁵ In the same way, curses, or defixiones, address to the gods of the lower world, were dropt into graves, these offering readiest access to the infernal regions.

³⁶ Tylor, *Primitive Culture*, II, 399, etc.

³⁷ Frazer, *Adonis, Attis, Osiris*,² 75.

³⁸ Rouse, *Greek Votive Offerings*, 296.

³⁹ Compare also the practice of keeping a part of the flesh of the victim, or the bones and other remains of the sacrifice, until the next sowing-time, when they were mixt with the seed corn and sown, in order to secure a good harvest. Frazer, *The Golden Bough*, II, 47; *Spirits of the Corn*, II, 20.

24. We hav seen that the forms of some of the characters ar not the same in the different inscriptions, especially in the case of *ce / ge*, § 21. Also that the forms found in the archaic inscriptions do not coincide exactly with those that we find in later Cyprian writing. In some of the latter cases, for example, *si* (§ 19), *csa* (§ 13), *pa* (§ 8, 3, § 11), *ge* (§ 8, 5 and 8, § 33), the later forms ar undoubtedly simplifications of the earlier. But in other cases it seems that we hav to do with early differences. Thus the usual Υ and Σ ar best derived from η and ο, inverted forms of Minoan Τ and Π ("P. 92 a," *S.M.* I, 169; "P. 110," *ib.* 175); while the Τ Π of ball A, § 8, 1-2, reflect Minoan Τ Π ("P. 58 b," *S.M.* I, 164; pl. 4 A, 50 b). From this it becomes clear that more than one form of Minoan writing was brought to Cyprus, and probably more than one form of Minoan speech,⁴⁰ much as divers forms of Greek writing wer brought to the northern Germanic tribes,¹² and as the English colonists brought various English dialects to America and even to the same colony.

25.

THE RING, *S.M.* I, 70.

As observd by Evans, we hav on the ring four characters, surrounded by two complementary ornaments. Of these four characters, the *ankh*, or *crux ansata*, lying prone and occupying the lower line, would appear to be the first character in the inscription.⁴¹ In Minoan we find the simple form of the ankh (*S.M.* I, 71) and the horned ankh (fig. 25, l. 4, *S.M.* I, 48). So far as I know, no Greek name for it is recorded; I shall therefore tentativly use the Egyptian name. The other characters Evans correctly identified with the later Cyprian —

⁴⁰ Cp. also *S.M.* I, 76.

⁴¹ Speaking of later Cyprian inscriptions, Larfeld says (p. 200): "In den Aufschriften eines Glasringes und eines Toilettenkästchens ist die untere Zeile vor der oberen zu lesen."

Λ Τ 8
ko na le,

which would give us —

♀ 1 Τ 8
ankh — ko — na — le
= ἀγκοναλη 'ring.'

26. This new ἀγκοναλη 'ring' is evidently a derivative in -λη, like —

ἀγκάλη 'the bent arm,' 'anything encircling,' and —

ἀγκύλη 'the bend of the arm,' 'loopt handle of a vase,' but was formed from the stem of —

ἀγκών 'the bend of the arm,' 'the arm,' 'the bend of a river,' as was —

ἀγκοίη < *ἀγκον-ιη 'the bent arm,' 'anything encircling.' The derivative ἀγκοναλη probably meant, not simply 'ring,' but a ring of a special kind or one designed for a specific purpose. Thus the legend was not necessarily an assertion of the obvious.

27. This leads us to suspect that the Greeks called the *ankh* by one of these various names for 'bent arm,' 'encircling thing,' 'ring,' 'looplike handle.' Compare the Latin *crux ansata* 'cross provided with an *ansa*,' that is, 'a handle, especially of a vase or pitcher.' It would lead us too far afield to discuss here the relation that the Greek word bears to the similar Egyptian word.

28. Evans associated early Cyprian 1, later Cyprian Λ co, with the like Minoan linear forms, doubtless correctly. These are linearizations of the pictograph of the knee (*genu* / γό[νν] / γό[ννα]) of a man sitting on the ground. Hence Phenician Γ and Λ, and Greek Γ, <, and Λ, that is, γέμυμα / γάμυμα; see § 5, end. Compare Greek 1 and Λ = λ.

29. Evans correctly associated the Cyprian sign for na (§ 25) with the corresponding Minoan signs. These are linearized forms of να[ός] 'temple,' more correctly 'dwelling (of the god),' that is, primarily a sacred pillar, or *bethel* / *baetylus*, which was regarded as "the house of God,"⁴² or the

⁴² Compare the story of Jacob: —

"And Jacob awaked out of his sleep, and he said, Surely the Lord is in this

aniconic image of the god, if we may so express ourselves. See Evans' highly instructive paper on *Mycenaean Tree and Pillar Cult.*⁴³ The Minoan forms of the character (*S.M.* i, 71, 14; i, 32 b)—

ꝝ Ꝟ ꝟ Ꝛ

reflect well-known forms of the baetylus in the function of “the pillar of the house,” for example, in the gold shrine of the doves,⁴⁴ the lion’s gate at Mycenae,⁴⁵ the Cnossus fresco,⁴⁶ the Maltese pillar shrine,⁴⁷ and the Minorcan “nau,”⁴⁸ that is, *ναός*(s). Observe that the *ναός* or sacred pillar is quite distinct from the *στήριγξ* or ordinary supporting column, § 12.

30. The 8 of our inscription is doubtless the 8 *le* of later Cyprian. Its origin, however, is not so simple. Evans compares the X of script A*⁴⁹; one would more naturally think of the 8 of script B, as shown at the bottom of fig. 21, *S.M.* i, 45. This probably reflects a word for ζεῦγλαι ‘the two straps or loops of the yoke, through which the beasts’ heads were put,’ which is preserved in λέπαδνον ‘a broad leather strap fastening the yoke to the neck and joined to the girth.’ This λέ[παδνον] would give us the later Cyprian *le*, § 5, end. Compare the *yoke* on the Phaestos Disc.

31. The X of script A* is a simplified form of pictographic X (the πέλεκυς or *double ax*, *S.M.* i, 195), forming the link between the latter and the Greek Β. In pictographic Minoan the πέ[λεκυς] is the regular means of spelling *pe* / *phe* / *be*. Out of X arose the usual Greek Β B βῆτα, the Semitic ℰ,

place; and I knew it not. And he was afraid, and said, How dreadful is this place! this is none other but the house of God, and this is the gate of heaven. And Jacob rose up early in the morning, and took the stone that he had put for his pillows, and set it up for a pillar, and poured oil upon the top of it. And he called the name of that place Bethel. . . . And Jacob vowed a vow, saying, . . . this stone, which I have set for a pillar, shall be God’s house,” *Genesis*, xxviii, 16–22.

⁴³ *J.H.S.* xxi (1901), 98–204.

⁴⁴ *Ib.* 191.

⁴⁵ *Ib.* 157

⁴⁶ *Ib.* 193.

⁴⁷ *Ib.* 197.

⁴⁸ “The center of a horizontally vaulted chamber derives its support from a column the upper part of which consists of cross slabs gradually increasing in size,” *ib.* 187. Compare the first form of the Minoan character given above, and see *S.M.* i, 32, b.

⁴⁹ *S.M.* i, 12 and 71, 13. This, however, spells *pe*, § 31.

the Cretan ρ (compare our b for B), and the ζ found on the lesser islands. Moreover, when one tries to make the letter χ by starting at the intersection of the cross lines, he is likely to produce the open form Δ, which is clearly reflected in such betas as —

Ϛ Corcyra	ϗ Melos
Ϛ Corinth	ϗ Melos
Ϛ Megara	ϗ Acarnania
Ϛ Thera	ϗ Selinus,

as well as the Cyprian ς pe / phe / be.

31 α. It might be suggested that, while the derivation of Greek ε and Cyprian ς pe / phe / be from the linear form of the double ax, or πέλεκυς, is clear, Evans may still have been right in deriving the Cyprian 8 le from the double ax under its Lydian or Carian name λά[βρος]. Such differentiation is theoretically possible, but the theory would in this case meet various obvious objections and seems to me much less likely than the explanation offered above, § 30.

32. We cannot use the form ἀγκοναλη as evidence of the Javonian character of Cypro-Minoan Greek; for such an object as a ring may pass from vanquisher to victor, from generation to generation, and from land to land.

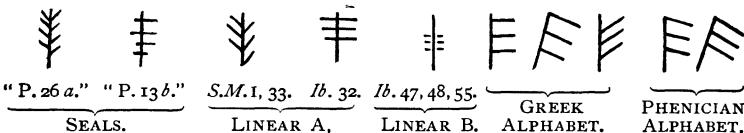
33. Though I am able to cite 8 in script B only, Cyprian script, both early and late, is, so far as the published material permits me to judge, more closely related to script A than to script B. For example, in script B the *hand* seems always to retain the thumb, which appears as a sort of s —



There may be four or three fingers. If four, the first and second, and the third and fourth, often meet in a point. The lower part of the hand appears as an inverted V. In script A, too, we may have (see the four examples, § 8) either four or three fingers, but little if any trace of a thumb; and the lower

part of the hand appears as a vertical line, which tends to be made at the right end of the horizontal line, without any raising of the stylus. In later Cyprian, the horizontal line became oblique and often was continued downward without bend, so that the former horizontal line and the vertical line below merged into one oblique line. Hence the two characteristic later Cyprian forms seen in § 8.

34. Perhaps the best tests for script A and script B are the respective forms of the *young plant*, or ϵ [*pros*] (*S.M.* I, 217), which had the value *e* and the following form development—



The Greek and Phenician forms are clearly derived from linear A, the horizontal lines having shifted to one side, as does the horizontal line with which we cross a *t*. So, too, \pm (*z*) tended to become \pm in Italy: Etruscan right \pm , left \pm ($z = ts, st$), Latin ζ, ζ, ζ (*g*).⁵⁰ Now, there can be little doubt that Cyprian $\star e$ (whence \star) is from \pm , a left-hand variety of the right-hand form preserved in Greek and Phenician. Cyprian $\ddot{\epsilon}$ is clearly a late form of \star and has no relation to the \pm of script B. In other words, here too Cyprian script goes back to script A. For the Cyprian *co* character Evans found prototypes in script A but not in script B.

35. But early Cyprian script is certainly not derived directly from the Cretan A script as represented by the specimens that Evans has thus far given us from either Phaestos or Cnossos. Instead, it appears to be an independent development of an early form of A. Script B is found only at Cnossos, where it came into use after the first destruction of the palace and remained until the second destruction, shortly before 1400. The Cyprian form of script A (which we may designate as script A₂) was brought to Cyprus about

⁵⁰ Hempl, "The Origin of the Latin Letters G and Z," *T.A.P.A.* xxx (1899), 24-41.

the same time. It would thus appear that the Minoan settlements in Cyprus were due to the ousting of people having Minoan culture somewhere on the mainland of Greece, and, in all probability, by the same intruders that destroyed the palace at Cnossos. Furthermore, it would also appear that the earlier introduction of script B at Cnossos had been due to a similar earlier incoming of a mainland people having Minoan culture. In both cases, the divergence of the script from the Cretan A would be due to its prolonged use in a separate community, and its consequent independent development.

36. It has more than once been suggested that, as the palace at Phaestos continued to flourish after the first destruction of the palace at Cnossos, this destruction was due to a conquest by the house of Phaestos. This seems reasonable. But it will not do to ascribe the subsequent culture and the introduction of script B at Cnossos to the coming in of people of Phaestos, inasmuch as the latter used script A (*S.M.* I, 31, etc.). Evans believes that after the destruction of the palace at Cnossos there was no immediate rebuilding, but that a lacuna ensued there, while Phaestos continued to thrive, only to fall in its turn. This would seem to be best explained on the supposition that Phaestos fell at the hands of newcomers from the mainland, who, however, established themselves at Cnossos instead of at Phaestos, and there introduced script B, which they had brought with them. In fact, it may be that these newcomers settled at Cnossos first, and later destroyed Phaestos. It is clear that we shall know who brought script B to Cnossos (and probably caused the destruction of the palace at Phaestos) as soon as specimens of script B are found abroad. That script A₂ came to Cyprus from the Peloponnesus has been made very likely by Evans.

37. Though thus only indirectly derived from Crete, the early Cyprian inscriptions form an interesting bridge between the Minoan of Crete and the later Cyprian Greek, and that, too, as regards language as well as in matters of script. Perhaps this brief paper may temporarily serve as an introduction to the study of Minoan Greek, my first report upon which will, I trust, appear in a very short time.